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EXAMINER

DANIEL JR, WILLIE J

ART UNIT PAPER NUMBER

2686

DATE MAILED: 09/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/099,723

Applicant(s)

UHLIK, CHRISTOPHER R.

Examiner

Willie J. Daniel, Jr.

Art Unit

2686

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-61 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-61 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 March 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on 14 March 2002 is in compliance with the provisions of 37 CFR 1.97 and is being considered by the examiner.

Drawings

2. The drawings are objected to because
 - a. **Fig. 1** “ref. 114” has “Resotre”.
 - b. **Figs. 2 and 3** are incorrectly labeled (see pg. 16, [0036], lines 1-2; pg. 18, [0043], lines 1-2).

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled “Replacement Sheet” in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner,

the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-40, 42-60 are rejected under 35 U.S.C. 102(b) as being anticipated by Hamano et al. (hereinafter Hamano) (US 5,604,928).

Regarding Claim 1, Hamano discloses a method:

determining a start of reception of radio signals by a radio transmit-receive unit (3) which reads on the claimed “radio” (see col. 4, lines 57-62; col. 5, lines 13-16; Fig. 2 “ref. 2”);

generating a reset signal (10, 226) which reads on the claimed “radio active signal” (see col. 5, lines 13-16,55-56; col. 9, lines 52-53; Figs. 2 “ref. 10”, 7 “ref. 226”), where the system generates signals for operating of the sub-CPU (2);

transmitting the radio active signal (10) to a coupled sub-CPU(2) which reads on the claimed “computer” to affect the radio interference generated by the coupled computer (2) (see col. 5, lines 13-16,27-47,55-56; col. 6, lines 43-48; col. 9, lines 52-53; Figs. 2 “ref. 10”, 7 “ref. 226”);

determining an end of reception of radio signals by the radio (see col. 6, lines 11; col. 16, lines 26-30; Fig. 2 “ref. 9”);

generating a radio not active signal (226) (see col. 5, lines 23-27; col. 9, lines 52-53; col. 9, line 65 - col. 10, line 4; Figs. 2 “ref. 10”, 6 “ref. 6”, 7 “ref. 226”), where the system releases the sub-CPU via a signal sent over the control or reset line (10, 226); and

transmitting the radio not active signal (226) to the coupled computer (2) to affect the radio interference generated by the coupled computer (2) (see col. 5, lines 23-31; Figs. 2 “ref. 10”, 6 “ref. 6”, 7 “ref. 226”), where the system releases the sub-CPU via a signal sent over the control or reset line (10, 226).

Regarding Claim 2, Hamano discloses the method of Claim 1, wherein determining the start of reception comprises predicting the start time of an assigned channel which reads on the claimed “time slot” (see col. 5, lines 14-19, 61-67; Figs. 2 “ref. 2, 7”, 3 “ref. 2”).

Regarding Claim 3, Hamano discloses the method of Claim 2, wherein predicting the start time comprises predicting the start time using a oscillation circuit (14) which reads on the claimed “timing reference” of the radio (3) (see col. 4, lines 50-56; col. 5, lines 14-19; Figs. 1, 7, 15).

Regarding Claim 4, Hamano discloses the method of Claim 2, wherein the assigned time slot is a receive time slot (channel) assigned to the coupled computer (2) and wherein predicting the start time comprises predicting the start time using the coupled computer's clock as a timing reference (14) (see col. 4, lines 50-56; col. 5, lines 14-19; col. 5, line 61 - col. 6, line 3; Fig. 2).

Regarding Claim 5, Hamano discloses the method of Claim 1, wherein transmitting the radio active signal comprises asserting a state on a reset or control line (10, 210) which reads on the claimed “connector” between the radio (3) and the coupled computer (2) (see

col. 5, lines 14-16,55-56; col. 9, lines 52-53; Figs. 1, 7), where the signal sent via the reset line.

Regarding Claim 6, Hamano discloses the method of Claim 5, wherein transmitting the radio not active signal comprises de-asserting the state on a connector (10, 210) between the radio (3) and the coupled computer (2) (see col. 5, lines 23-27,55-56; col. 9, lines 52-53; col. 9, line 65 - col. 10, line 4; col. 10, lines 18-19; Figs. 2, 7), where the signal sent via the reset line.

Regarding Claim 7, Hamano discloses the method of Claim 1, wherein transmitting the radio active signal comprises sending an instruction over a reset (control) line (8,10, 210, 226) which reads on the claimed "high speed system bus" to the coupled computer (2) (see col. 4, lines 41-42; col. 5, line 14-15,55-56; Figs. 1, 7), where the sub-CPU is instructed to the rest state.

Regarding Claim 8, Hamano discloses the method of Claim 7, wherein sending an instruction comprises sending an reset signal (10) which reads on the claimed "interrupt signal" to CPU operating software (2) of the coupled computer (2) (see col. 4, lines 41-47; col. col. 5, lines 14-15,55-56; Figs. 2).

Regarding Claim 9, Hamano discloses the method of Claim 7, wherein sending an instruction comprises sending an instruction to a power supply monitor IC (6) which reads on the claimed "power management module" of the coupled computer (2) (see col. 5, lines 1-6,32-34; Fig. 1 "ref. 1").

Regarding Claim 10, Hamano discloses the method of Claim 1, wherein transmitting the radio not active signal comprises sending a hardware interrupt to wake the CPU (2) of the

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coupled computer (2) (see col. 5, lines 23-25; col. 9, lines 52-53; col. 9, line 65 - col. 10, line 4; Figs. 1, 3 “ref. 6”, 7).

Regarding Claim 11, Hamano discloses the method of Claim 1, wherein the radio active signal and the radio not active signal comprise a reset signal (10, 210) which reads on the claimed “single signal” indicating the start time and the duration of the radio reception (see col. 5, lines 13-26; col. 6, lines 23-28; col. 9, line 51 - col. 10, line 4; Fig. 2 “ref. 2 and ref. 9”, 3, 9).

Regarding Claim 12, Hamano discloses the method of Claim 1, wherein determining the end of reception comprises predicting the end of reception based on the start time and the expected duration of reception (see col. 5, lines 13-26; col. 6, lines 23-28; col. 9, line 51 - col. 10, line 4; Fig. 2 “ref. 2 and ref. 9”, 3, 9).

Regarding Claim 13, the claim is rejected for the same reasons as set forth above in the rejection of claim 1.

Regarding Claim 14, the claim is rejected for the same reasons as set forth above in the rejection of claim 2.

Regarding Claim 15, the claim is rejected for the same reasons as set forth above in the rejection of claim 3.

Regarding Claim 16, the claim is rejected for the same reasons as set forth above in the rejection of claim 7.

Regarding Claims 17 and 25, the claims are rejected for the same reasons as set forth above in the rejection of claim 9.

Regarding Claims 18 and 26, the claim is rejected for the same reasons as set forth above in the rejection of claim 11.

Regarding Claim 19, the claim is rejected for the same reasons as set forth above in the rejection of claim 12.

Regarding Claim 20, Hamano discloses a portable electronic device which reads on the claimed “radio” (see col. 4, lines 30-33; col. 9, lines 1-3; Figs. 1, 7, 15) comprising:

a radio transmit-receive unit (3) which reads on the claimed “receiver”;

a computer unit (1) which reads on the claimed “processor” to determine a start of reception of radio signals by the receiver (3) and generate a radio active signal and to determine an end of reception of radio signals by the receiver (3) and generate a radio not active signal (see col. 5, lines 14-31; Figs. 1-3, 7-9); and

an reset line (8, 10) which reads on the claimed “external interface” to transmit the radio active signal and the radio not active signal to a coupled computer (2) to affect the radio interference generated by the coupled computer (2) (see col. 5, lines 14-31, 55-56; col. 4, lines 41-42; Figs. 1-3, 7-9), where the computer unit communicates with the sub-CPU via the reset line (10) or the control line (8).

Regarding Claim 21, Hamano discloses the radio of Claim 20, further comprising a timing reference (14) coupled to the processor (1) for use in determining the start of reception and the end of reception by prediction (see col. 5, lines 13-26; col. 6, lines 23-28; col. 9, line 51 - col. 10, line 4; Fig. 2 “ref. 2 and ref. 9”, 3, 8-9).

Regarding Claim 22, Hamano discloses the radio of Claim 20, further

comprising a connector (10) between the radio (3) and the coupled computer coupled to the external interface (10) and wherein the external interface (10) transmits the radio active signal (reset signal - 10) by asserting a state on the connector (10) (see col. 5, lines 14-16,55-56; col. 9, lines 52-53; Figs. 1, 7).

Regarding Claim 23, the claim is rejected for the same reasons as set forth above in the rejection of claim 6.

Regarding Claim 24, the claim is rejected for the same reasons as set forth above in the rejection of claim 8.

Regarding Claim 27, Hamano discloses a method comprising:

receiving a radio active signal at a computer (2) having a CPU (2) from a coupled radio (3) (see col. 5, lines 13-19,55-56; Figs. 1, 2 “ref. 2”);

adjusting system operating parameters of the computer (2) to reduce interference with the radio (3) (see col. 5, lines 13-19,32-47; Fig. 1);

receiving a radio not active signal at the computer (2) from the coupled radio (3) (see col. 5, lines 23-27; col. 9, line 65 - col. 10, line 4); and

readjusting the system operating parameters of the computer for operation without regard to interference with the radio (3) (see col. 5, lines 23-27; col. 9, line 65 - col. 10, line 4), where the sub-CPU is released to active state.

Regarding Claim 28, Hamano discloses the method of Claim 27, further comprising polling the coupled radio (3) for a radio active signal before receiving the radio active signal (see col. 5, lines 56-58; Fig. 2 “ref. 2”).

Regarding Claim 29, Hamano discloses the method of Claim 27, further comprising predicting a start time for reception by the radio (3) based on a channel which reads on the claimed "time slot" assigned to the radio (3) and wherein adjusting the system operating parameters comprises adjusting the system operating parameters for the duration of the time slot (see col. 4, lines 50-56; col. 5, lines 14-19, 61-67; Figs. 2 "ref. 2, 7", 3 "ref. 2", 15).

Regarding Claim 30, Hamano discloses the method of Claim 29, wherein the assigned time slot (channel) is a receive time slot and wherein predicting the start time comprises predicting the start time using the computer's clock as a timing reference (14) (see col. 4, lines 50-56; col. 5, lines 14-19; col. 5, line 61 - col. 6, line 3; Figs. 1-3, 7-9).

Regarding Claim 31, Hamano discloses the method of Claim 27, wherein receiving the reset signal (10) which reads on the claimed "radio active signal" comprises detecting the assertion of a state on a connector (10, 210) between the radio (3) and the computer (2) (see col. 5, lines 14-16, 55-56; col. 9, lines 52-53; Figs. 1-3, 7-9), where the signal sent via the reset or control line.

Regarding Claim 32, Hamano discloses the method of Claim 31, wherein receiving the release signal which reads on the claimed "radio not active signal" comprises detecting the de-assertion of the state on the connector (8, 10) between the radio (3) and the computer (2) (see col. 5, lines 23-27, 55-56; col. 9, lines 52-53; col. 9, line 65 - col. 10, line 4; col. 10, lines 18-19; Figs. 1-3, 7-9), where the signal sent via the reset or control line.

Regarding Claim 33, Hamano discloses the method of Claim 27, wherein receiving the reset signal (10) which reads on the claimed "radio active signal" comprises receiving an instruction over a reset (control) line (8, 10, 210, 226) which reads on the claimed

“communications bus” coupled to the coupled radio (3) (see col. 4, lines 41-42; col. 5, line 14-15,55-56; Figs. 1-3, 7-9), where the sub-CPU is instructed to the rest state.

Regarding Claim 34, Hamano discloses the method of Claim 33, wherein receiving an instruction comprises receiving a reset signal (10) which reads on the claimed “interrupt signal” to CPU operating software (2) of the computer (2) (see col. 4, lines 41-47; col. col. 5, lines 14-15,55-56; Figs. 2, 8).

Regarding Claim 35, Hamano discloses the method of Claim 33, wherein receiving an instruction comprises receiving an instruction to a power supply monitor IC (6) which reads on the claimed “power management module” of the computer (2) (see col. 5, lines 1-6,32-34; col. 9, lines 40-46; Fig. 1 “ref. 1”, 7, 15).

Regarding Claim 36, Hamano discloses the method of Claim 27, wherein receiving the radio not active signal comprises receiving a hardware interrupt to wake the CPU (2) of the computer (2) (see col. 5, lines 23-25; col. 9, lines 52-53; col. 9, line 65 - col. 10, line 4; Figs. 1, 3 “ref. 6”, 7, 9 “ref. 6”, 15, 17 “ref. 6”).

Regarding Claim 37, Hamano discloses the method of Claim 27, wherein the radio active signal and the radio not active signal comprise a single signal (10) indicating the start time and the duration of the radio reception (see col. 5, lines 13-26; col. 6, lines 23-28; col. 9, line 51 - col. 10, line 4; Fig. 2 “ref. 2 and ref. 9”, 3, 9).

Regarding Claim 38, Hamano discloses the method of Claim 27, wherein adjusting the sub-CPU (2) which reads on the claimed “system” operating parameters comprises reducing the system (2) clock rate (see col. 5, lines 14-16; Figs. 1, 7, 15), where the sub-CPU is set to rest state in which the reducing the clock rate would be inherent.

Regarding Claim 39, Hamano discloses the method of Claim 27, wherein adjusting the system (2) operating parameters comprises turning off a CPU clock of the computer (2) (see col. 5, lines 32-39; Figs. 1, 7, 15), where the power to the sub-CPU is shut down in which the turning off of the clock would be inherent.

Regarding Claim 40, Hamano discloses the method of Claim 27, wherein adjusting the system operating parameters comprises interrupting traffic on the computer system bus (see col. col. 14, lines 11-16; col. 19, lines 18-23; Figs. 7, 14, 15, 22), where the both computer unit (201) and sub-CPU (203) are halted.

Regarding Claim 42, the claim is rejected for the same reasons as set forth above in the rejection of claim 27.

Regarding Claim 43, the claim is rejected for the same reasons as set forth above in the rejection of claim 28.

Regarding Claim 44, the claim is rejected for the same reasons as set forth above in the rejection of claim 29.

Regarding Claim 45, the claim is rejected for the same reasons as set forth above in the rejection of claim 31.

Regarding Claim 46, the claim is rejected for the same reasons as set forth above in the rejection of claim 33.

Regarding Claims 47 and 54, the claims are rejected for the same reasons as set forth above in the rejection of claim 34.

Regarding Claims 48 and 58, the claims are rejected for the same reasons as set forth above in the rejection of claim 38.

Regarding Claims 49 and 59, the claim is rejected for the same reasons as set forth above in the rejection of claim 39.

Regarding Claim 50, Hamano discloses a computer comprising:

a control line (9, 209) which reads on the claimed "I/O bus" to receive a radio active signal and a radio not active signal from a coupled radio (3) (see col. 5, lines 13-19,55-56; col. 9, lines 51-53; Figs. 1, 2 "ref. 2", 7, 8); and

a CPU (2) coupled to the bus (9) to adjust system operating parameters of the computer to reduce interference with the radio (3) in response to the radio active signal (10) and to readjust the system operating parameters of the computer (2) for operation without regard to interference with the radio (3) in response to the radio not active (col. 5, lines 13-47,55-56; Figs. 1-3, 7-9).

Regarding Claim 51, Hamano discloses the computer of Claim 50, further comprising a timing reference clock (4) to use in predicting a start time for reception by the radio in response to the radio active signal (see col. 4, lines 50-56; col. 5, lines 14-19,56-58,61-67; col. 9, lines 51-53; Figs. 2 "ref. 2, 7", 3 "ref. 2", 15).

Regarding Claim 52, Hamano discloses the computer of Claim 50, further comprising a connector coupled to the I/O bus (9, 10) and wherein the I/O bus (9,) receives the radio active signal by detecting the assertion of a state on the connector (9, 10) (see col. 5, lines 14-16,55-56; col. 9, lines 52-53; Figs. 1-3, 7-9), where the signal sent via the reset or control line.

Regarding Claim 53, Hamano discloses the computer of Claim 52, wherein the I/O bus (9, 10) receives the radio not active signal by detecting the de-assertion of the state on the

connector (9, 10)) (see col. 5, lines 23-27,55-56; col. 9, lines 51-53; col. 9, line 65 - col. 10, line 4; col. 10, lines 18-19; Figs. 1-3, 7-9), where the signal sent via the reset or control line.

Regarding Claim 55, Hamano discloses the computer of Claim 54, further comprising a power management module (6) coupled to the CPU (2) to receive an instruction from the CPU (2) to execute power management functions to reduce interference (see col. 5, lines 31-39; Figs. 1, 7, 15).

Regarding Claim 56, the claim is rejected for the same reasons as set forth above in the rejection of claim 36.

Regarding Claim 57, the claim is rejected for the same reasons as set forth above in the rejection of claim 37.

Regarding Claim 60, the claim is rejected for the same reasons as set forth above in the rejection of claim 40.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 41 and 61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamano et al. (hereinafter Hamano) (US 5,604,928) in view of Watanabe (US 6,542,726 B2).

Regarding Claim 41, Hamano discloses of adjusting the system operating parameters (see col. 4, lines 14-31), where the sub-CPU is adjusted between rest and active state.

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Hamano fails to disclose having the feature suspending operation of selected peripheral components of the computer. However, the examiner maintains that the feature suspending operation of selected peripheral components of the computer was well known in the art, as taught by Watanabe.

In the same field of endeavor, Watanabe discloses the feature suspending operation of selected peripheral circuit control unit (102) which reads on the claimed “peripheral components” of the CPU (101) which reads on the claimed “computer” (see col. 4, lines 18-34; col. 5, lines 6-11, 60-64; col. 6, lines 1-34; Figs. 1-3).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Hamano and Watanabe to have the feature suspending operation of selected peripheral components of the computer, in order to suppress noise during radio communication (see col. 3, lines 26-28, 51-53), as taught by Watanabe.

Regarding Claim 61, the claim is rejected for the same reasons as set forth above in the rejection of claim 41.

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Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Willie J. Daniel, Jr. whose telephone number is (703) 305-8636. The examiner can normally be reached on 7:30-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha D. Banks-Harold can be reached on (703) 305-4379. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Marsha D Banks-Harold

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WJD,JR
17 September 2004